



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/944,174

09/04/2001

Stefan Wahl

Q65929

9849

7590

12/29/2004

SUGHRUE, MION, ZINN,
MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

BHANDARI, PUNEET

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,174

Applicant(s)

WAHL ET AL.

Examiner

Puneet Bhandari

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Drawings

1. The subject matter of this application requires illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing.

Specification

2. The disclosure is objected to because of the following informalities:

On page 2, line 6 and line 16, the word 'fulfil' should be "fulfill".

On page 1, line 16 missing word "access" between multiple systems.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Momona (US 5,815,660). The Momona (US 5,815,660) reference teaches all of the limitations of the listed claims with the reasoning that follows.

Regarding claim 1, a method of transmitting a data packet from a first transmitting/receiving device to a second transmitting/receiving device is anticipated by "communication between master and slave" is disclosed in column 01, lines 8-10 comprising the following steps:

transmission of at least two transmit authorizations from the second transmitting/receiving device to the first transmitting/receiving device is anticipated by *"master station transmits polling signal to each slave station"* disclosed in column 01, lines 24-25.

transmission of data packet from the first transmitting/receiving device to the second transmitting/receiving device following the reception of transmit authorizations is anticipated by *"upon receiving polling signal slave transmits data packet"* disclosed in column 1, lines 27-30.

Interruption of the transmission of transmit authorizations from the second transmitting/receiving device to the first transmitting/receiving device following the reception of the data packet is anticipated by *"master station is provided with a means to stop sending the polling signal to slave station"* disclosed in column 01, lines 62-65.

Regarding claim 2, at least two authorizations are sent from the second transmitting/receiving device to the first transmitting/receiving device, when a further data packet is expected, is anticipated by *"slave station having transmission data has to be kept waiting until it receives the polling signal"* disclosed in column 1, lines 42-44 and the transmission of the transmit authorizations from the second transmitting/receiving device to the first transmitting receiving device is interrupted again as soon as the second transmitting/receiving device has received the further data packet is anticipated by *"master station is provided with a means to stop sending the polling signal to slave station"* disclosed in column 01, lines 62-65.

Regarding claim 3, following the interruption of the transmission of transmit authorizations from the second transmitting/receiving device to the first transmitting/receiving device, at least two transmit authorizations are sent from the second transmitting device to a third transmitting device is anticipated by “*A polling system has been used as one of the methods for competition controlling slave station on a multiple access channel*” disclosed in column 1, lines 20-23, and the transmission of the transmit authorization from the second transmitting/receiving device to the third transmitting receiving device is interrupted as soon as a data packet from the third transmitting/receiving device has been received in the second transmitting/receiving device is anticipated by “*master station is provided with a means to stop sending the polling signal to slave station*” disclosed in column 01, lines 62-65.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 4,6-8 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Eng (US 5,963,557). The Eng (US 5,963,557) reference teaches all of the limitations of the listed claims with the reasoning that follows.

Regarding claim 4, a method for sending transmit authorization from a first transmitting/receiving device to a second transmitting/receiving device is clearly anticipated by “*each subscriber station is polled and transmit a signal to the head end*” disclosed in column 3, lines 49-50; wherein transmitting authorizations are

Sent to the second transmitting/receiving device in a first time period and wherein the first time period is shorter than a second time period which adjoins the first time period and in which no transmit authorizations are sent to the second transmitting/receiving device is anticipated by "*Uplink channel is divided in time slots and mini time slots*" disclosed in column 4, lines 12-15 and column 4, lines 24-25.

Regarding claim 6, further comprising the step: at least in a time slot of second time period, transmit authorizations are sent to a third transmitting/receiving device is anticipated by "*slot assignment reservation protocol*" disclosed in column 4, lines 33-35.

Regarding claim 7, a control center for multiple access system comprising a control unit for controlled transmission of transmit authorizations to transmitting/receiving devices is anticipated by "head end has a head end controller" disclosed in column 01, lines 43 & 44 and Figure 1.

wherein the control unit is capable of sending at least two transmitting authorizations to a transmitting/receiving device and of interrupting the transmission of transmit authorizations to the one transmitting/receiving device as soon as the control center has received a data packet from the one transmitting/receiving device is anticipated by "*the head end receives the reservation request control packets from mini-slots and responds by assigning one or more slots to each requesting subscriber*" disclosed in column 4, line 50-55.

Regarding claim 8, the control center having the form of a head end or a hub of a HFC or HFR system, a control center of a hyperLAN system, or a base station of a LMDS or UMTS system, is anticipated by "*Hybrid fiber coaxial cable network having*

Art Unit: 2666

head end" disclosed in column 1, line 41 and Fig. 1; and the transmitting/receiving devices each having the form of a cable modem or a radio station is anticipated by "Subscriber stations, such as cable modems, set top boxes or data terminals" disclosed in column 1, lines 56-57.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Momona (US 5,815,660) in view of Eng (US 5,963,557). Momona (US 5,815,660) teaches all the limitations of the claim 5 (see 102 rejection for claim 1 above) except Momona (US 5,815,660) fails to disclose the time interval between two authorizations fulfilling predetermined delay jitter requirements. Eng (US 5,963,557) discloses a technique of varying the time division pattern of upstream channel by modifying the ratio of mini-slots (transmit authorizations) and slots (data packets) (see column 6, line 35-40). At the time invention was made it would have been obvious to a person with ordinary skill in art to modify the method of transmitting data packet of Momona (US 5,815,660) by adding a technique of varying the ratio of mini-slots and slots allocation in upstream channel used for transmitting and receiving data packets

Art Unit: 2666

between devices. One in ordinary skill in art would have been motivated to do this to increase the utilization of bandwidth in communication channel (see column 6, lines 30).

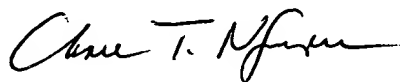
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Puneet Bhandari whose telephone number is 571-272-2057. The examiner can normally be reached on 9.00 AM To 5.30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Puneet Bhandari
Examiner
Art Unit 2666

PB



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600